Site: Pries Enterprises
ID#: IAD981716806
Break 1.5
Other:
1-20-92

CDM FEDERAL PROGRAMS CORPORATION

January 20, 1992

CONFIDENTIAL

Mr. Ken Herstowski
U. S. Environmental Protection Agency
Region VII RCRA Branch
726 Minnesota Avenue
Kansas City, KS 66101

Project: ARCS Regions VI, VII, & VIII Contract No. 68-W9-0021
DCN: 7760-017-A4-RT-BYLD
Subject: Final Report for the Pries Enterprises, Inc. Site (RCRA ID No. IAD981716806)

Dear Mr. Herstowski:

CDM FEDERAL PROGRAMS CORPORATION (FPC) is pleased to submit this Final Report for the Pries Enterprises, Inc. site. We have addressed all comments on the Draft Final Report received on December 18, 1991.

Attached is a summary of our responses to the reviewers' comments and the PA Scoresheets.

If you have any questions, please call me at (913) 492-8181.

Sincerely,

CDM FEDERAL PROGRAMS CORPORATION

Philip C. Dula, P.G.
Project Manager

Attachments

cc: DC
RF

PCD.117

30024742
Superfund

8215 Melrose Drive, Suite 100 Lenexa, KS 66214 913 492-8181

FPC RESPONSES TO COMMENTS

RE: Draft Final Report for the Pries Inc. Site - Independence, IA.

Comments Submitted by: Bill Lowe, RCRA

Comments Received: 12/18/91

NO.	REFERENCE	COMMENT	
1	Section 2.1	Comment:	"Section 2.1 should include the county in which the facility is located."
		Response:	Comment noted. Section 2.1 is revised accordingly.
2	Table 3-1	Comment:	"Table 3-1. This table is of limited value as it is presented, it should include well/screen elevations (or at least depths) and the type of aquifers (eg. glacial till, alluvium, bedrock etc.) that represent the production zone for each well."
		Response:	Comment noted, and Table 3-1 is revised to include type of aquifer, casing depths and well depths.
3	Fig. 2-1	Comment:	"Section 3.2, page 3.3. It appears from Figure 2-1 that surface drainage would be to the west, northwest. If the Facility is located correctly on the map, it is on the west side of a drainage divide.In addition, the only place where the Wapsipinicon River is less than a mile from the Facility is to the north."
		Response:	Comment noted and confirmed. Section 3.2 is revised accordingly.

NO.	REFERENCE	COMMENT	
4	Section 3.3	Comment:	"Section 3.3, page 3-2 (page 3-2 is mistakenly labeled 3-3). There should be more specific information about the site geology. Apparently the site is underlain by glacial till but that is not really clear. In addition there should be some investigation of literature or construction documents or well completion records that provide an indication of the thickness of the till. It is not possible to adequate assess the significance of subsurface contamination without this type of information."
		Response:	Geology information on central and eastern Iowa was reviewed, and well construction logs for municipal wells 1, 2, 3, and 4 in Independence, Iowa, were consulted. A stratigraphic column was prepared from information in the well construction logs and appears as Figure 3-1. More specific geology information is incorporated into Section 3.3.
4a	Section 3.3	Comment:	"Section 3.3, last paragraph. This entire paragraph is unclear, for example; Aquifer is not synonymous with bedrock; Based on this text, the uppermost bedrock aquifer is comprised of both Devonian and Silurian bedrock units; Fully penetrating wells are not described by " thickness"; Why does an aquifer which produces 1000 gpm only yield 700 gpm? This entire paragraph needs more research and then rewriting."
		Response:	Comments noted and changes have been made accordingly in Section 3.3.

NO. REFERENCE COMMENT

Comments Submitted by: Don Lininger, EPA

Comments Received: 12/18/91

General Comments

Comment: "Don Lininger made several edits within the text of the original Final Report."

Response: These comments were noted and addressed.

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PA Scoresheets

PRELIMINARY ASSESSMENT

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CERCLIS IDENTIFICATION NUMBER	
STATE: IOWA	SITE NUMBER: IAD051460485

SITE LOCATION

SITE NAME: Legal, common or descriptive name of site
PRIES Enterprises, Inc.

STREET ADDRESS, ROUTE or SPECIFIC LOCATION IDENTIFIER
701 17th Street S.E

CITY	STATE	ZIP CODE	TELEPHONE
INDEPENDENCE	IA	50644	(319) 324-7068

COORDINATES: LATITUDE and LONGITUDE: 42°27'5" and 91°53'13"
TOWNSHIP, RANGE, and SECTION: T88W, R9W and sec. 10

OWNER/OPERATOR IDENTIFICATION

OWNER	OPERATOR
PRIES ENTERPRISES, Inc	MERLE J McMAHON
OWNER ADDRESS: 701 17th Street S.E	OPERATOR ADDRESS: 701 17th Street S.E
CITY: INDEPENDENCE	CITY: INDEPENDENCE
STATE: IA; ZIP CODE: 50644; TELEPHONE: (319) 324-7068	STATE: IA; ZIP CODE: 50644; TELEPHONE: (319) 334-7068

TYPE OF OWNERSHIP

- ☑ PRIVATE
- ☐ FEDERAL: Agency name _____
- ☐ STATE
- ☐ COUNTY
- ☐ MUNICIPAL
- ☐ OTHER: _____
- ☐ NOT SPECIFIED

OWNER/OPERATOR NOTIFICATION ON FILE

- ☐ NONE
- ☐ CERCLA 103 C, UNCONTROLLED WASTE SITE DATE: _____
- ☑ RCRA 3001 DATE: 8/14/87

SITE STATUS	YEARS OF OPERATION	APPROXIMATE SIZE OF SITE
☒ ACTIVE	BEGINNING YEAR: 1985	≈ 55,000 ft²
☐ INACTIVE	ENDING YEAR: _____	
☐ UNKNOWN	☐ UNKNOWN	

SITE EVALUATION

AGENCY / ORGANIZATION	COM / ARCS
INVESTIGATOR	Amanda Natalie
CONTACT	Don Lininger, Region VII EPA/RCRA
ADDRESS	650 Minnesota Avenue Kansas City Kansas
TELEPHONE	(913) 551-7224
DATE	08/16/91

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NOV 06 1990

Site Name: PRIES ENTERPRISES INC 2

Date: 08/29/91

GENERAL INFORMATION

Site Description and Operational History:

The Pries Enterprises facility is located at 701, 17th street S.E, Independence, Iowa. The plant was built in 1985 and covers approximately 55,000 ft^2. Manufacturing operation began on 1/1/86. The plant operated two to three days a week from 1/1/86 to 8/1/86 and has since utilized an 80 hour/2 shift per week operation. At present, approximately 25 to 30 employees staff operation at Pries Enterprises.

Pries Enterprises manufactures extruded aluminum products. raw aluminum billets are heated to 900°F and then pressed through dies by hydraulic activated force. In May 1987 an addition to the plant was built to incorporate painting of extruded aluminum products. The painting operation process was designed to hang the extrusions horizontally, followed by seven dip tanks for cleaning and etching, parts drying, paint application, and paint curing. The aluminum parts cleaning operation was composed of a caustic ($NaOH$) and soap cleaning tank, two clear water rinse tanks, and electrode chrome deposition tank and two clear water final rinse tanks. The painting operation was not used in production due to pre-engineering during the pilot study phase performed after construction was completed.

Probable Contaminants of Concern:

(Previous investigations: analytical data)

The probable contaminants of concern at Pries facility include:

- Sodium hydroxide
- Chromium (Hexavalent)
- Toluene
- [illegible]
- [illegible]

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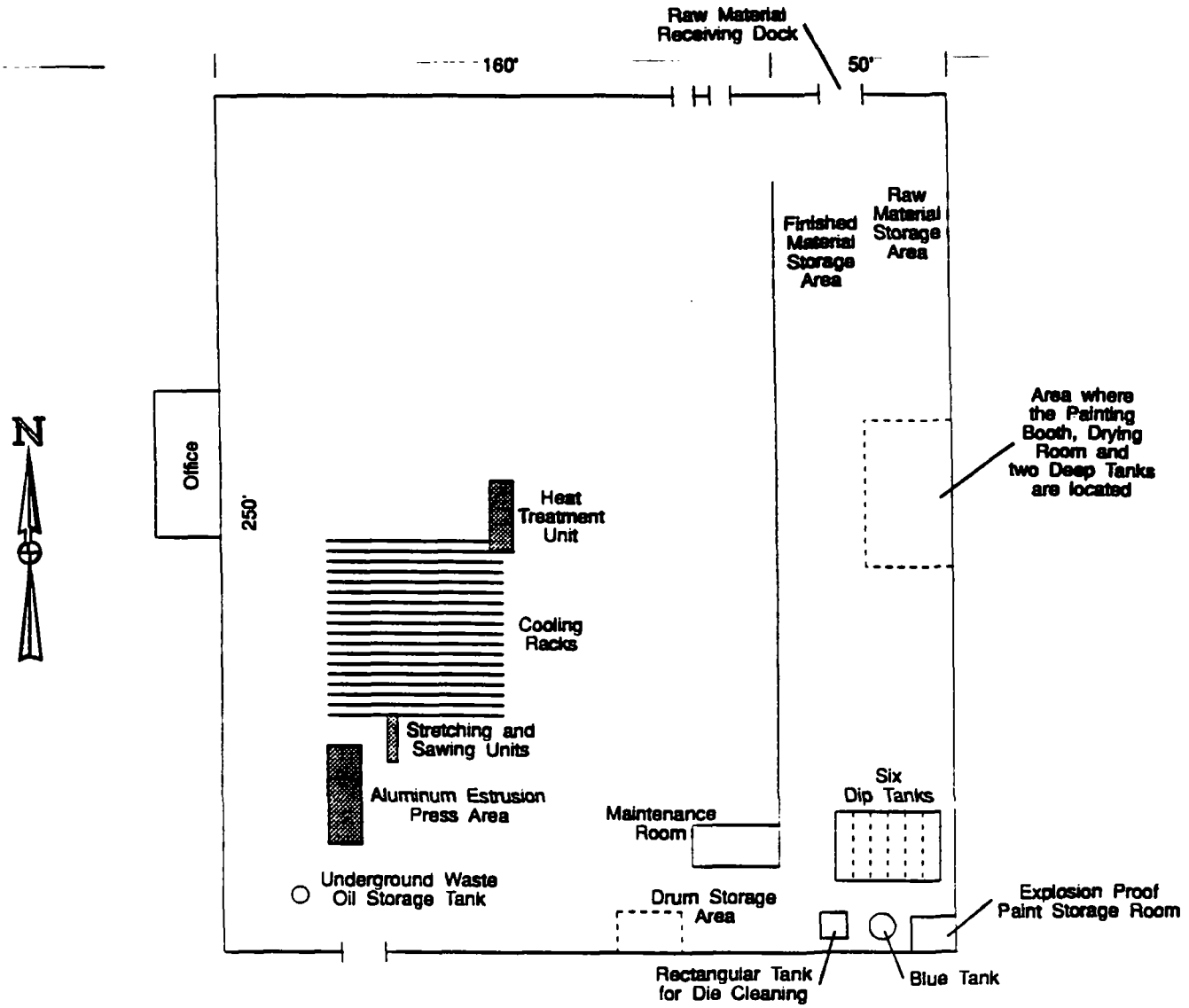
Site Name: PRIES ENTERPRISES

Date: 08/29/91

GENERAL INFORMATION (continued)

Site Sketch:

(Show all pertinent features; indicate sources and closest targets)



Project No.: 7760-013	Scale 0' 50' 100'	PRIES Facility Map	Figure 1
	CDM Federal Programs Corporation		8/91

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Site Name: PRIES ENTERPRISES INC. 4
Date: 08/29/91

GENERAL INFORMATION (continued)

Source Descriptions:

4 drums of waste oil at the drum storage area

1 underground 6 foot deep by 4 square foot waste oil tank located at the North-East section of the facility

Waste Characteristics (WC) Calculations:
(See PA Table 1, page 5)

1) 4 drums → < 1000 drums → WQ = 4 ÷ 10 = .40

2) Tank → 6 x 4 x 4 = 96 ft^3 ≈ 718 gal

1 gal = .1337 ft^3

718 gal < 50,000 gallons → WQ = 718 − 500 = 1.44

Total 1 and 2

WQ = .40 + 1.44 = 1.84

WC = 18

WC = 18

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Site Name: PRIES ENTERPRISES INC. 5
Date: 08/29/91

PA TABLE 1: WASTE CHARACTERISTICS (WC) SCORES

PA Table 1a: WC Scores for Single Source Sites and Formulas for Multiple Source Sites

TIER	SOURCE TYPE	SINGLE SOURCE SITES (assigned WC scores)			MULTIPLE SOURCE SITES
		WC = 18	*WC = 32*	*WC = 100*	Formula for Assigning Source WQ Values
CONSTITUENT	N/A	≤100 lbs	>100 to 10,000 lbs	>10,000 lbs	*lbs ÷ 1*
WASTESTREAM	N/A	≤500,000 lbs	>500,000 to 50 million lbs	>50 million lbs	*lbs ÷ 5,000*
VOLUME	Landfill	≤6.75 million ft^3 ≤250,000 yd^3	>6.75 million ft^3 to 675 million ft^3 >250,000 to 25 million yd^3	>675 million ft^3 >25 million yd^3	*ft^3 ÷ 67,500* *yd^3 ÷ 2,500*
	Surface impoundment	≤6,750 ft^3 ≤250 yd^3	>6,750 ft^3 to 675,000 ft^3 >250 to 25,000 yd^3	>675,000 ft^3 >25,000 yd^3	*ft^3 ÷ 67.5* *yd^3 ÷ 2.5*
	Drums	≤1,000 drums	>1,000 to 100,000 drums	>100,000 drums	*drums ÷ 10*
	Tanks and non-drum containers	≤50,000 gallons	>50,000 to 5 million gallons	>5 million gallons	*gallons ÷ 500*
	Contaminated soil	≤6.75 million ft^3 ≤250,000 yd^3	>6.75 million ft^3 to 675 million ft^3 >250,000 to 25 million yd^3	>675 million ft^3 >25 million yd^3	*ft^3 ÷ 67,500* *yd^3 ÷ 2,500*
	Pile	≤6,750 ft^3 ≤250 yd^3	>6,750 ft^3 to 675,000 ft^3 >250 to 25,000 yd^3	>675,000 ft^3 >25,000 yd^3	*ft^3 ÷ 67.5* *yd^3 ÷ 2.5*
AREA	Landfill	≤340,000 ft^2 ≤7.8 acres	>340,000 to 34 million ft^2 >7.8 to 780 acres	>34 million ft^2 >780 acres	*ft^2 ÷ 3,400* *acres ÷ 0.078*
	Surface impoundment	≤1,300 ft^2 ≤0.029 acres	>1,300 to 130,000 ft^2 >0.029 to 2.9 acres	>130,000 ft^2 >2.9 acres	*ft^2 ÷ 13* *acres ÷ 0.00029*
	Contaminated soil	≤3.4 million ft^2 ≤78 acres	>3.4 million to 340 million ft^2 >78 to 7,800 acres	>340 million ft^2 >7,800 acres	*ft^2 ÷ 34,000* *acres ÷ 0.78*
	Pile*	≤1,300 ft^2 ≤0.029 acres	>1,300 to 130,000 ft^2 >0.029 to 2.9 acres	>130,000 ft^2 >2.9 acres	*ft^2 ÷ 13* *acres ÷ 0.00029*
	Land treatment	≤27,000 ft^2 ≤0.62 acres	>27,000 to 2.7 million ft^2 >0.62 to 62 acres	>2.7 million ft^2 >62 acres	*ft^2 ÷ 270* *acres ÷ 0.0062*

1 ton = 2,000 lbs = 1 yd^3 = 4 drums = 200 gallons

* Use area of land surface under pile, not surface area of pile.

PA Table 1b: WC Scores for Multiple Source Sites

WQ Total	*WC Score*
>0 to 100	18
>100 to 10,000	32
>10,000	100

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Site Name: PRIES INTERPRISES INC 6

Date: 08/29/91

GROUND WATER PATHWAY
GROUND WATER USE DESCRIPTION

Describe Ground Water Use Within 4-miles of the Site:

(Provide generalized stratigraphy; information on aquifers, municipal, and or private wells)

Groundwater is used as the major source of potable supplies for the residents in Independence Iowa. There are four municipal wells supplying the city residence and two municipal wells the mental health hospital east of town. The depth of these wells range from 260 to 310 feet. There are also four known industrial and private wells operating in and around the city of Independence.

Well #	Type	Location	Withdrawal rate	Service
1	Municipal	NW of Independence	600 gal/min	City of Independence
2	"	SW " "	625 "	" " "
3	"	NE " "	420 "	" " "
4	"	NE " "	420 "	" " "
5	"	1 mile SW of Independence	250 "	Independence State Hospital
6	"	"	250 "	" " "

Show calculations of ground water drinking water populations:

The population of Independence is 5,392 and the four municipal wells serve all the residents. The water is not blended together. There are only 4 private wells identified and are mostly for industrial use.

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GROUND WATER PATHWAY CRITERIA LIST

Site Name: PRES ENTERPRISES INC

Date: 08/29/91

This chart provides guidelines to assist you in hypothesizing the presence of a suspected release and identifying primary targets. It is expected that not all of this information will be available during the PA. Also, these criteria are not all-inclusive; list any other criteria you use to hypothesize a suspected release or to identify primary targets. This chart will record your professional judgment in evaluating these factors.

The "Suspected Release" section of the chart guides you through evaluation of some site, source, and pathway conditions to help hypothesize whether a release from the site is likely. If a release is suspected, use the "Primary Targets" section to guide you through evaluation of some conditions that will help identify targets likely to be exposed to hazardous substances. You may use this section of the chart more than once, depending on the number of targets you feel may be considered "primary." In the "Primary Targets" section on this sheet, record the responses for the well that you feel has the highest probability of being exposed to hazardous substances.

Check the boxes to indicate a "yes", "no", or "unknown" answer to each question. If you check the "Suspected Release" box as "yes", make sure that you assign a Likelihood of Release value of 550 for the pathway.

GROUND WATER PATHWAY

SUSPECTED RELEASE

Yes	No	Unknown	
☐	☒	☐	Are sources poorly contained?
☒	☐	☐	Is the source a type likely to contribute to ground water contamination (e.g., wet lagoon)?
☐	☒	☐	Is waste quantity particularly large?
☐	☒	☐	Is precipitation heavy and infiltration rate high?
☐	☒	☐	Is the site located in an area of karst terrain?
☐	☐	☒	Is the subsurface highly permeable or conductive?
☐	☒	☐	Is drinking water drawn from a shallow aquifer?
☐	☒	☐	Are suspected contaminants highly mobile in ground water?
☐	☒	☐	Does any circumstantial evidence of ground water or drinking water contamination exist?
☐	☒		Other criteria? _____
☐	☒		**SUSPECTED RELEASE?**

PRIMARY TARGETS

Yes	No	Unknown	
☐	☐	☐	Is any drinking-water well nearby?
☐	☐	☐	Is any nearby drinking-water well closed?
☐	☐	☐	Has foul-tasting or foul-smelling water been reported by any nearby drinking-water users?
☐	☐	☐	Do any nearby wells have a large drawdown or high production rate?
☐	☐	☐	Are drinking-water wells located between the site and other wells that are suspected to be exposed to hazardous substances?
☐	☐	☐	Does any circumstantial evidence of ground water or drinking water contamination exist?
☐	☐	☐	Does any drinking-water well warrant sampling?
☐	☐		Other criteria? _____
☐	☐		**PRIMARY TARGET(S) IDENTIFIED?**

Summarize the rationale for suspected release (attach an additional page if necessary):

NO suspected release

Summarize the rationale for Primary Targets (attach an additional page if necessary):

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Site Name: PRES ENTERPRISES INC 8

Date: 08/27/91

GROUND WATER PATHWAY SCORESHEET

Pathway Characteristics		
Do you suspect a release (see Ground Water Pathway Criteria List, page 7)?	Yes ___	No ___
Is the site located in karst terrain?	Yes ___	No ✓
Depth to aquifer:	5	ft
Distance to the nearest drinking-water well:	8000	ft

LIKELIHOOD OF RELEASE	A Suspected Release	B No Suspected Release	References
1. SUSPECTED RELEASE: If you suspect a release to ground water (see page 7), assign a score of 550, and use only column A for this pathway.	[illegible]	[illegible]	
2. NO SUSPECTED RELEASE: If you do not suspect a release to ground water, and the site is in karst terrain or the depth to aquifer is 70 feet or less, assign a score of 500; otherwise, assign a score of 340. Use only column B for this pathway.	[illegible]	500	1,4
LR =		500	

TARGETS			
3. PRIMARY TARGET POPULATION: Determine the number of people served by drinking water from wells that you suspect have been exposed to hazardous substances from the site (see Ground Water Pathway Criteria List, page 7). 0 people x 10 =		[illegible]	
4. SECONDARY TARGET POPULATION: Determine the number of people served by drinking water from wells that you do NOT suspect have been exposed to hazardous substances from the site, and assign the total population score from PA Table 2. Are any wells part of a blended system? Yes ✓ No ___ If yes, attach a page to show apportionment calculations.		95	2
5. NEAREST WELL: If you have identified any Primary Targets for ground water, assign a score of 50; otherwise, assign the highest Nearest Well score from PA Table 2. If no drinking-water wells exist within 4 miles, assign a score of zero.	[illegible]	20	2
6. WELLHEAD PROTECTION AREA (WHPA): Assign a score of 20 if any portion of a designated WHPA is within ¼ mile of the site; assign 5 if from ¼ to 4 miles.	[illegible]	[illegible]	2
7. RESOURCES: A score of 5 is assigned.	5	5	
T =		155	

WASTE CHARACTERISTICS			
8. A. If you have identified any Primary Targets for ground water, assign the waste characteristics score calculated on page 4, or a score of 32, whichever is GREATER; do not evaluate part B of this factor.	[illegible]	[illegible]	
B. If you have NOT identified any Primary Targets for ground water, assign the waste characteristics score calculated on page 4.	[illegible]	8	
WC =		8	

GROUND WATER PATHWAY SCORE: $\frac{LR \times T \times WC}{82{,}500}$ = [illegible] 16.70

Site Name: PRIES ENTERPRISES
Date: 08/29/91

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PA TABLE 2: VALUES FOR SECONDARY GROUND WATER TARGET POPULATIONS

PA Table 2a: Non-Karst Aquifers

Distance from Site	Population	Nearest Well (choose highest)	Population Served by Wells Within Distance Category: 1 to 10	11 to 30	31 to 100	101 to 300	301 to 1,000	1,001 to 3,000	3,001 to 10,000	10,001 to 30,000	30,001 to 100,000	100,001 to 300,000	Population Value
0 to ¼ mile		20	1	2	5	16	52	163	521	1,633	5,214	16,325	
> ¼ to ½ mile		(18)	(1)	1	3	10	32	101	323	1,012	3,233	10,121	1
> ½ to 1 mile		9	1	1	2	5	17	52	167	522	1,668	5,224	
> 1 to 2 miles	6342	5	1	1	1	3	9	29	(94)	294	939	2,938	94
> 2 to 3 miles		3	1	1	1	2	7	21	68	212	678	2,122	
> 3 to 4 miles		2	1	1	1	1	4	13	42	131	417	1,306	
Nearest Well =		20										Score =	95

PA Table 2b: Karst Aquifers

Distance from Site	Population	Nearest Well (use 20 for karst)	Population Served by Wells Within Distance Category: 1 to 10	11 to 30	31 to 100	101 to 300	301 to 1,000	1,001 to 3,000	3,001 to 10,000	10,001 to 30,000	30,001 to 100,000	100,001 to 300,000	Population Value
0 to ¼ mile		20	1	2	5	16	52	163	521	1,633	5,214	16,325	
> ¼ to ½ mile		20	1	1	3	10	32	101	323	1,012	3,233	10,121	
> ½ to 1 mile		20	1	1	3	8	26	82	261	816	2,607	8,162	
> 1 to 2 miles		20	1	1	3	8	26	82	261	816	2,607	8,162	
> 2 to 3 miles		20	1	1	3	8	26	82	261	816	2,607	8,162	
> 3 to 4 miles		20	1	1	3	8	26	82	261	816	2,607	8,162	
Nearest Well =												Score =	

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Site Name: PRIES ENTEPRISES INC.
Date: 08-26-91

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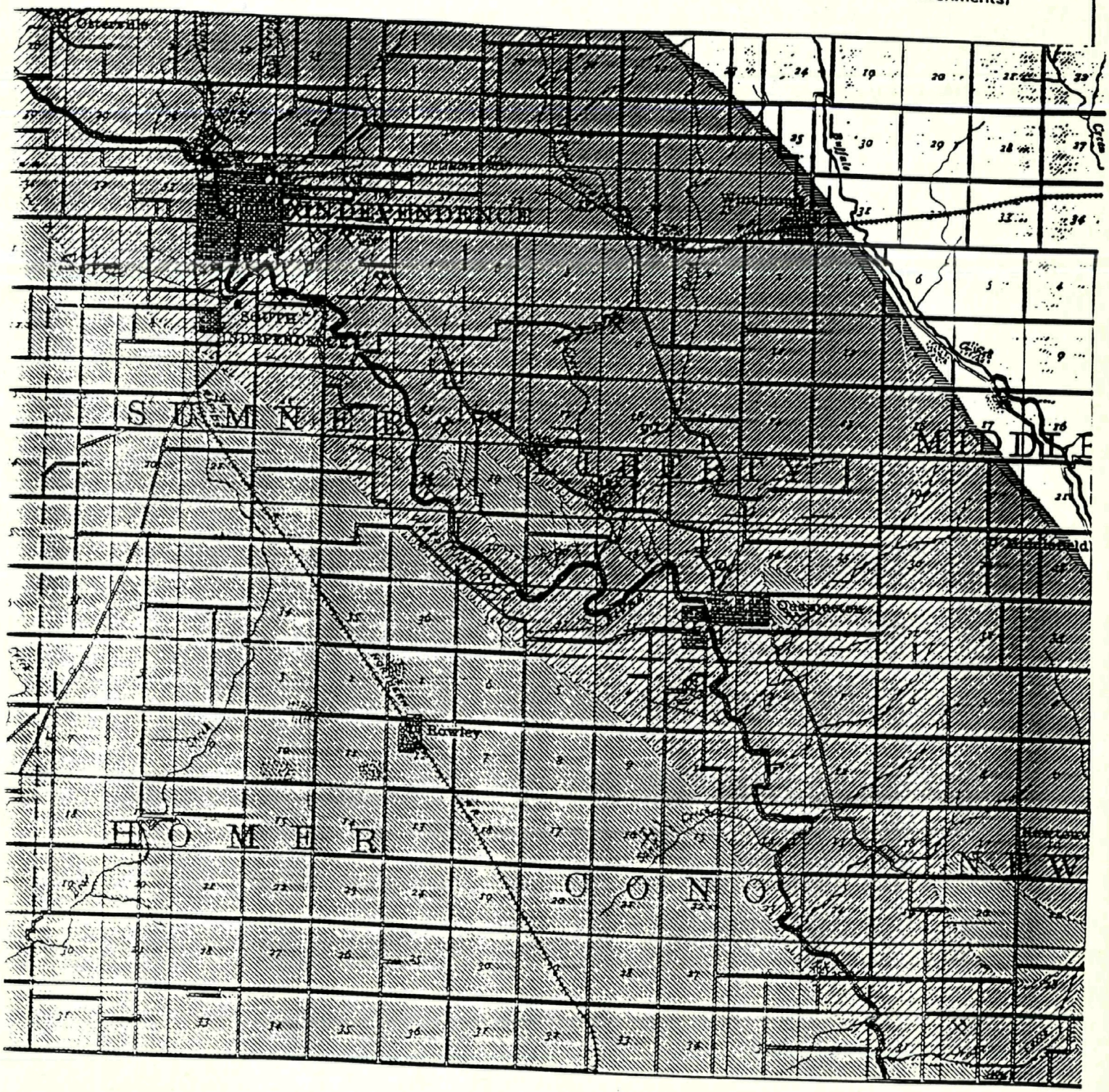
SURFACE WATER PATHWAY
MIGRATION ROUTE SKETCH

Provide a Sketch of the Surface Water Migration Route:
(include runoff route, probable point of entry, 15-mile target distance limit, intakes, fisheries, and sensitive environments)



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SURFACE WATER PATHWAY CRITERIA LIST

Site Name: PRIES ENTERPRISES INC.
Date: 08/29/91

This chart provides guidelines to assist you in hypothesizing the presence of a suspected release and identifying primary targets. It is expected that not all of this information will be available during the PA. Also, these criteria are not all-inclusive: list any other criteria you use to hypothesize a suspected release or to identify primary targets. This chart will record your professional judgment in evaluating these factors.

The "Suspected Release" section of the chart guides you through evaluation of some site, source, and pathway conditions to help hypothesize whether a release from the site is likely. If a release is suspected, use the "Primary Targets" section to guide you through evaluation of some conditions that will help identify targets likely to be exposed to hazardous substances. You may use this section of the chart more than once, depending on the number of targets you feel may be considered "primary." In the "Primary Targets" section on this sheet, record the responses for the target that you feel has the highest probability of being exposed to hazardous substances.

Check the boxes to indicate a "yes", "no", or "unknown" answer to each question. If you check the "Suspected Release" box as "yes", make sure that you assign a Likelihood of Release value of 550 for the pathway.

SURFACE WATER PATHWAY

SUSPECTED RELEASE

Yes	No	Unknown	
☒	☐	☐	Is surface water nearby?
☐	☒	☐	Is waste quantity particularly large?
☒	☐	☐	Is the drainage area large?
☐	☐	☒	Is precipitation heavy or infiltration rate low?
☐	☒	☐	Are sources poorly contained or prone to runoff or flooding?
☐	☒	☐	Is a runoff route well defined (e.g., ditch or channel leading to surface water)?
☐	☒	☐	Is vegetation stressed along the probable runoff path?
☐	☒	☐	Are suspected contaminants highly persistent in surface water?
☐	☐	☐	Are sediments/water unnaturally discolored?
☐	☐	☐	Is wildlife unnaturally absent?
☐	☒	☐	Has deposition of waste into surface water been observed?
☒	☐	☐	Is ground water discharge to surface water likely?
☐	☒	☐	Is there any circumstantial evidence of surface water contamination?
☐	☐		Other criteria? _____
☐	☒		**SUSPECTED RELEASE?**

PRIMARY TARGETS

Yes	No	Unknown	
☐	☐	☐	Is any target nearby? If yes:
			☐ Drinking-water intake
			☐ Fishery
			☐ Sensitive environment
☐	☐	☐	Has an intake, fishery, or recreational area been closed?
☐	☐	☐	Is there any circumstantial evidence of surface water contamination at or downstream of a target?
☐	☐	☐	Does any target warrant sampling? If yes:
			☐ Drinking-water intake
			☐ Fishery
			☐ Sensitive environment
☐	☐		Other criteria? _____
☐	☐		**PRIMARY INTAKE(S) IDENTIFIED?**
☐	☐		**PRIMARY FISHERY IDENTIFIED?**
☐	☐		**PRIMARY SENSITIVE ENVIRONMENT(S) IDENTIFIED?**

Summarize the rationale for suspected release (attach an additional page if necessary):

No Suspected release

Summarize the rationale for Primary Targets (attach an additional page if necessary):

SURFACE WATER PATHWAY
LIKELIHOOD OF RELEASE AND DRINKING WATER THREAT SCORESHEET

Pathway Characteristics
Do you suspect a release (see Surface Water Pathway Criteria List, page 11)? Yes ___ No ✓
Distance to surface water: ______ ft
Flood Frequency: 100 year floodplain yrs
What is the downstream distance to the nearest drinking-water intake? none miles
nearest fishery? none miles nearest sensitive environment? ______ miles

LIKELIHOOD OF RELEASE

	A Suspected Release	B No Suspected Release	References
1. SUSPECTED RELEASE: If you suspect a release to surface water (see page 11), assign a score of 550, and use only column A for this pathway.	(550)		
2. NO SUSPECTED RELEASE: If you do not suspect a release to surface water, and the distance to surface water is 2,500 feet or less, assign a score of 500; otherwise, assign a score from the table below. Use only column B for this pathway.		(500,400,300 or 100) 400	2
LR =	(550)	(500,400,300 or 100) 400	

Floodplain	Score
Site in annual or 10-yr floodplain	500
Site in 100-yr floodplain	400
Site in 500-yr floodplain	300
Site outside 500-yr floodplain	100

DRINKING WATER THREAT TARGETS

3. Determine the water body types, flows (if applicable), and number of people served by all drinking-water intakes within the 15-mile target distance limit. If there are no drinking-water intakes within the target distance limit, assign a total Targets score of 5 at the bottom of this page (Resources only) and proceed to page 14. — References: 2

Intake Name	Water Body Type	Flow	People Served
		___ cfs	
		___ cfs	
		___ cfs	

4. PRIMARY TARGET POPULATION: If you suspect any drinking-water intake listed above has been exposed to hazardous substances from the site (see Surface Water Pathway Criteria List, page 11), list the intake name(s) and calculate the factor score based on the number of people served.

______________, ______________,

______ people x 10 = — References: 2

5. SECONDARY TARGET POPULATION: Determine the Secondary Target Population score from PA Table 3 based on the populations using drinking-water from intakes that you do NOT suspect have been exposed to hazardous substances from the site.

Are any intakes part of a blended system? Yes ___ No ___
If yes, attach a page to show apportionment calculations.

	A	B	References
5. Secondary Target Population		?	2
6. NEAREST INTAKE: If you have identified any Primary Targets for the drinking water threat (Factor 4), assign a score of 50; otherwise, assign the Nearest Intake score from PA Table 3. If no drinking-water intake exists within the 15-mile target distance limit, assign a score of zero.	(50,20,10,2,1, or 0)	(20,10,2,1, or 0) /	2
7. RESOURCES: A score of 5 is assigned.	(5) 5	(5) 5	
T =		–	

PA TABLE 3: VALUES FOR SECONDARY SURFACE WATER TARGET POPULATIONS

Surface Water Body Flow Characteristics (see PA Table 4)	Population	Nearest Intake (choose highest)	Population Served by Intakes Within Flow Category: 1 to 30	31 to 100	101 to 300	301 to 1,000	1,001 to 3,000	3,001 to 10,000	10,001 to 30,000	30,001 to 100,000	100,001 to 300,000	300,001 to 1,000,000	1,000,001 to 3,000,000	Population Value
<10 cfs	____	20	2	5	16	52	163	521	1,633	5,214	16,325	52,136	163,246	____
10 to 100 cfs	____	2	1	1	2	5	16	52	163	521	1,633	5,214	16,325	____
>100 to 1,000 cfs	____	1	0	0	1	1	2	5	16	52	163	521	1,633	____
>1,000 to 10,000 cfs	6:12	0	0	0	0	0	1	(1)	2	5	16	52	163	1
>10,000 cfs or Great Lakes	____	0	0	0	0	0	0	0	1	1	2	5	16	____
3-mile Mixing Zone	____	10	1	3	8	26	82	261	816	2,607	8,162	26,068	81,663	____
Nearest Intake =													Score =	1

PA TABLE 4: SURFACE WATER TYPE / FLOW CHARACTERISTICS WITH DILUTION WEIGHTS FOR SECONDARY SURFACE WATER SENSITIVE ENVIRONMENTS

Type of Surface Water Body: Water Body Type	OR	Flow Characteristics	Dilution Weight
minimal stream		flow less than 10 cfs	1
small to moderate stream		flow 10 to 100 cfs	0.1
moderate to large stream		flow greater than 100 to 1,000 cfs	N/A
large stream to river		flow greater than 1,000 to 10,000 cfs	N/A
large river		flow greater than 10,000 cfs	N/A
3-mile mixing zone of quiet flowing streams or rivers		flow 10 cfs or greater	N/A
coastal tidal water (harbors, sounds, bays, etc.), ocean, or Great Lakes		N/A	N/A

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SURFACE WATER PATHWAY (continued)
HUMAN FOOD CHAIN THREAT SCORESHEET

LIKELIHOOD OF RELEASE		A Suspected Release	B No Suspected Release	References
Enter the Surface Water Likelihood of Release score from page 12.	LR =		400	

HUMAN FOOD CHAIN THREAT TARGETS

8. Determine the water body types and flows (if applicable) for all fisheries within the 15-mile target distance limit. If there are no fisheries within the target distance limit, assign a Targets score of 0 at the bottom of this page and proceed to page 15.

Fishery Name	Water Body Type	Flow
		cfs
		cfs
		cfs
		cfs
		cfs

9. PRIMARY FISHERIES: If you suspect any fishery listed above has been exposed to hazardous substances from the site (see Surface Water Criteria List, page 11), assign a score of 300 and do not evaluate Factor 10. List the Primary Fisheries:

_____, _____

_____, _____

10. SECONDARY FISHERIES: If you have not identified any Primary Fisheries, assign a Secondary Fisheries score from the table below using the LOWEST flow at any fishery within the 15-mile target distance limit.

Lowest Flow	Secondary Fisheries Score
< 10 cfs	210
10 to 100 cfs	30
> 100 cfs, coastal tidal waters, oceans, or Great Lakes	12

		A	B	References
				3
			15	
T =			1	

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Site Name: FRIES ENTERPRISES INC. 15
Date: 08/29/91

SURFACE WATER PATHWAY (continued)
ENVIRONMENTAL THREAT SCORESHEET

LIKELIHOOD OF RELEASE		A Suspected Release	B No Suspected Release	References
Enter the Surface Water Likelihood of Release score from page 12.	LR =		400	

ENVIRONMENTAL THREAT TARGETS

11. Determine the water body types and flows (if applicable) for all surface water sensitive environments within the 15-mile target distance limit (see PA Tables 4 and 5). If there are no sensitive environments within the 15-mile target distance limit, assign a Targets score of 0 at the bottom of this page, and proceed to page 17.

Environment Name	Water Body Type	Flow
		_____cfs
		_____cfs
		_____cfs
		_____cfs
		_____cfs

12. PRIMARY SENSITIVE ENVIRONMENTS: If you suspect any sensitive environment listed above has been exposed to hazardous substances from the site (see Surface Water Criteria List, page 11), assign a score of 300 and do not evaluate Factor 13. List the Primary Sensitive Environments:

_____, _____,

_____, _____.

13. SECONDARY SENSITIVE ENVIRONMENTS:

A. For Secondary Sensitive Environments on surface water bodies with flows of 100 cfs or less, assign scores as follows, and do not evaluate part B of this factor:

Flow	Dilution Weight (PA Table 4)	Environment Type and Value (PA Tables 5 and 6)	Total
cfs	x	=	
cfs	x	=	
cfs	x	=	
cfs	x	=	
cfs	x	=	

Sum = 0

B. If NO Secondary Sensitive Environments are located on surface water bodies with flows of 100 cfs or less, assign a score of 10. ✓

T = 5

PA TABLE 5: SURFACE WATER AND AIR SENSITIVE ENVIRONMENTS VALUES

Sensitive Environment	Assigned Value
Critical habitat for Federally designated endangered or threatened species	100
Marine Sanctuary	
National Park	
Designated Federal Wilderness Area	
Ecologically important areas identified under the Coastal Zone Wilderness Act	
Sensitive Areas identified under the National Estuary Program or Near Coastal Water Program of the Clean Water Act	
Critical Areas identified under the Clean Lakes Program of the Clean Water Act (subareas in lakes or entire small lakes)	
National Monument	
National Seashore Recreation Area	
National Lakeshore Recreation Area	
Habitat known to be used by Federally designated or proposed endangered or threatened species	75
National Preserve	
National or State Wildlife Refuge	
Unit of Coastal Barrier Resources System	
Federal land designated for the protection of natural ecosystems	
Administratively Proposed Federal Wilderness Area	
Spawning areas critical for the maintenance of fish/shellfish species within a river system, bay or estuary	
Migratory pathways and feeding areas critical for the maintenance of anadromous fish species in a river system	
Terrestrial areas utilized by large or dense aggregations of vertebrate animals (semi-aquatic foragers) for breeding	
National river reach designated as recreational	
Habitat known to be used by State designated endangered or threatened species	50
Habitat known to be used by a species under review as to its Federal endangered or threatened status	
Coastal Barrier (partially developed)	
Federally designated Scenic or Wild River	
State land designated for wildlife or game management	25
State designated Scenic or Wild River	
State designated Natural Area	
Particular areas, relatively small in size, important to maintenance of unique biotic communities	
State designated areas for the protection/maintenance of aquatic life under the Clean Water Act	5
Wetlands	See PA Table 6 (Surface Water Pathway) or PA Table 9 (Air Pathway)

PA TABLE 6: SURFACE WATER WETLANDS FRONTAGE VALUES

Total Length of Wetlands	Assigned Value
Less than 0.1 mile	0
0.1 to 1 mile	25
Greater than 1 to 2 miles	50
Greater than 2 to 3 miles	75
Greater than 3 to 4 miles	100
Greater than 4 to 8 miles	150
Greater than 8 to 12 miles	250
Greater than 12 to 16 miles	350
Greater than 16 to 20 miles	450
Greater than 20 miles	500

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Site Name: PRIES ENTERPRISES INC. 17

Date: 05/29/91

SURFACE WATER PATHWAY (concluded)
WASTE CHARACTERISTICS, THREAT, AND PATHWAY SCORE SUMMARY

WASTE CHARACTERISTICS	A Suspected Release	B No Suspected Release
14. A. If you have identified ANY Primary Targets for surface water (pages 12, 14, or 15), assign the waste characteristics score calculated on page 4, or a score of 32, whichever is GREATER; do not evaluate part B of this factor.		
B. If you have NOT identified any Primary Targets for surface water, assign the waste characteristics score calculated on page 4.		18
WC =		18

SURFACE WATER PATHWAY THREAT SCORES

Threat	Likelihood of Release (LR) Score (from page 12)	Targets (T) Score	Pathway Waste Characteristics (WC) Score (determined above)	Threat Score LR x T x WC / 82,500
Drinking Water	400	5	18	.436
Human Food Chain	400	0	18	.087
Environmental	400	0	18	.087

SURFACE WATER PATHWAY SCORE
(~~Drinking~~ Water Threat + Human Food Chain Threat + Environmental Threat)

0.61

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SOIL EXPOSURE PATHWAY CRITERIA LIST

Site Name: PRIES ENTERPRISES INC.
Date: 08/29/91

This chart provides guidelines to assist you in hypothesizing the presence of a resident population. It is expected that not all of this information will be available during the PA. Also, these criteria are not all-inclusive; list any other criteria you use to hypothesize resident populations. This chart will record your professional judgment in evaluating this factor.

Use the resident population section to guide you through evaluation of some site and source conditions that will help identify targets likely to be exposed to hazardous substances. You may use this section of the chart more than once, depending on the number of nearby people you feel may be considered part of a resident population. Record the responses for the resident population target that you feel has the highest probability of being exposed to hazardous substances.

Check the boxes to indicate a "yes", "no", or "unknown" answer to each question.

SOIL EXPOSURE PATHWAY

SUSPECTED CONTAMINATION	*RESIDENT POPULATION*			
	Yes	No	Unknown	
Surficial contamination is assumed.	☐	☐	☒	Are there residences, schools, or day care facilities on or within 200 feet of areas of suspected contamination?
	☐	☒	☐	Are residences, schools, or day care facilities located on adjacent land previously owned or leased by the site owner/operator?
	☐	☒	☐	Is there an overland migration route that might spread hazardous substances near residences, schools, or day care facilities?
	☐	☒	☐	Are there any reports of adverse health effects from onsite or adjacent residents or students, exclusive of apparent drinking water or air contamination problems?
	☐	☒	☐	Does any offsite property warrant sampling?
	☐	☐		Other criteria? _____
	☐	☒		RESIDENT POPULATION IDENTIFIED?

Summarize the rationale for resident population (attach an additional page if necessary):

There is no surface water use by residents

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Site Name: PRIES ENTERPRISES INC 79

Date: 08/29/91

SOIL EXPOSURE PATHWAY SCORESHEET

Pathway Characteristics	
Do any people live on or within 200 ft of areas of suspected contamination?	Yes X No ___
Do any people attend school or day care on or within 200 ft of areas of suspected contamination?	Yes ___ No X
Is the facility active? Yes X No ___ If yes, estimate the number of workers: 30	

LIKELIHOOD OF EXPOSURE		A Suspected Contamination	B No Suspected Contamination	References
1. SUSPECTED CONTAMINATION: Surficial contamination is assumed. A score of 550 is assigned.	LE =	550		4

RESIDENT POPULATION THREAT TARGETS

2. RESIDENT POPULATION: Determine the number of people occupying residences or attending school or day care on or within 200 feet of areas of suspected contamination (see Soil Exposure Pathway Criteria List, page 18). 0 people x 10 =		0		5
3. RESIDENT INDIVIDUAL: If you have identified any Resident Population (Factor 2), assign a score of 50; otherwise, assign a score of 0.		0		5
4. WORKERS: Assign a score from the following table based on the total number of workers at the facility and nearby facilities with suspected contamination:		5		5
5. TERRESTRIAL SENSITIVE ENVIRONMENTS: Assign a value from PA Table 7 for each terrestrial sensitive environment that is located on an area of suspected contamination:	Sum =	0		3
6. RESOURCES: A score of 5 is assigned.		5		
	T =	5		

Number of Workers	Score
0	0
1 to 100	5
101 to 1,000	10
>1,000	15

Terrestrial Sensitive Environment Type	Value

WASTE CHARACTERISTICS

7. Assign the waste characteristics score calculated on page 4.	WC =	18	

RESIDENT POPULATION THREAT SCORE: $\frac{LE \times T \times WC}{82{,}500}$ = 0.60

NEARBY POPULATION THREAT SCORE: *Assign a score of 2* = 2

SOIL EXPOSURE PATHWAY SCORE: Resident Population Threat + Nearby Population Threat = 2.6

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Site Name: AYES ENTERPRISES INC 20
Date: 01/29/91

PA TABLE 7: SOIL EXPOSURE PATHWAY
TERRESTRIAL SENSITIVE ENVIRONMENT VALUES

Terrestrial Sensitive Environments	Assigned Value
Terrestrial critical habitat for Federally designated endangered or threatened species National Park Designated Federal Wilderness Area National Monument	100
Terrestrial habitat known to be used by Federally designated or proposed threatened or endangered species National Preserve (terrestrial) National or State terrestrial Wildlife Refuge Federal land designated for protection of natural ecosystems Administratively proposed Federal Wilderness Area Terrestrial areas utilized by large or dense aggregations of animals (vertebrate species) for breeding	75
Terrestrial habitat used by State designated endangered or threatened species Terrestrial habitat used by species under review for Federally designated endangered or threatened status	50
State lands designated for wildlife or game management State designated Natural Areas Particular areas, relatively small in size, important to maintenance of unique biotic communities	25

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AIR PATHWAY CRITERIA LIST

Site Name: IRIS ENTERPRISES INC.
Date: 08/29/91

This chart provides guidelines to assist you in hypothesizing the presence of a suspected release. It is expected that not all of this information will be available during the PA. Also, these criteria are not all-inclusive; list any other criteria you use to hypothesize a suspected release. This chart will record your professional judgment in evaluating this factor.

The "Suspected Release" section of the chart guides you through evaluation of some conditions to help hypothesize whether a release from the site is likely. For the Air Pathway, if a release is suspected, "Primary Targets" are any residents, workers, students, or sensitive environments within ¼ mile of the site.

Check the boxes to indicate a "yes", "no", or "unknown" answer to each question. If you check the "Suspected Release" box as "yes", make sure that you assign a Likelihood of Release value of 550 for the pathway.

AIR PATHWAY

SUSPECTED RELEASE				PRIMARY TARGETS
Yes	No	Unknown		
☐	☒	☐	Have odors been reported?	*If you suspect a release to air, evaluate all populations and sensitive environments within ¼ mile (including those counted as Primary Targets.*
☐	☒	☐	Has a release of hazardous substances to the air been directly observed?	
☐	☒	☐	Are there any reports of adverse health effects (e.g., headaches, nausea, dizziness) potentially resulting from migration of hazardous substances through the air?	
☐	☒	☐	Is there any circumstantial evidence of an air release?	
☐	☐		Other criteria? _____	
☐	☒		**SUSPECTED RELEASE?**	

Summarize the rationale for suspected release (attach an additional page if necessary):

NO Suspected release

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Date: 08/29/91

AIR PATHWAY SCORESHEET

Pathway Characteristics

Do you suspect a release (see Air Pathway Criteria List, page 21)? Yes ___ No ___

Distance to the nearest individual: _____ ft

	A Suspected Release	B No Suspected Release	References
LIKELIHOOD OF RELEASE			
1. SUSPECTED RELEASE: If you suspect a release to air (see page 21), assign a score of 550, and use only column A for this pathway.			___
2. NO SUSPECTED RELEASE: If you do not suspect a release to air, assign a score of 500, and use only column B for this pathway.		500	#5
LR =		500	
TARGETS			
3. PRIMARY TARGET POPULATION: Determine the number of people subject to exposure from a release of hazardous substances through the air (see Air Pathway Criteria List, page 21). _____ people x 10 =			___
4. SECONDARY TARGET POPULATION: Determine the number of people within the 4-mile target distance limit, and assign the total population score from PA Table 8.		9	#5
5. NEAREST INDIVIDUAL: If you have identified any Primary Targets for the air pathway, assign a score of 50; otherwise, assign the highest Nearest Individual score from PA Table 8.		20	#5
6. PRIMARY SENSITIVE ENVIRONMENTS: Sum the sensitive environment values (PA Table 5) and wetland acreage values (PA Table 9) for environments subject to exposure from air hazardous substances (see Air Pathway Criteria List, page 21).			
Sensitive Environment Type / Value: _____ / _____ ; _____ / _____			
Sum =			___
7. SECONDARY SENSITIVE ENVIRONMENTS: Use PA Table 10 to determine the score for secondary sensitive environments.		0	#3
8. RESOURCES: A score of 5 is assigned.	5	5	
T =		34	
WASTE CHARACTERISTICS			
9. A. If you have identified any Primary Targets for the air pathway, assign the waste characteristics score calculated on page 4, or a score of 32, whichever is GREATER; do not evaluate part B of this factor.			
B. If you have NOT identified any Primary Targets for the air pathway, assign the waste characteristics score calculated on page 4.		18	
WC =		18	

AIR PATHWAY SCORE: $\dfrac{LR \times T \times WC}{82{,}500}$ = 3.7

Site Name: PRIES ENTERPRISES INC.
Date: 08/29/91

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PA TABLE 8: VALUES FOR SECONDARY AIR TARGET POPULATIONS

Distance from Site	Population	Nearest Individual (choose highest)	Population Within Distance Category: 1 to 10	11 to 30	31 to 100	101 to 300	301 to 1,000	1,001 to 3,000	3,001 to 10,000	10,001 to 30,000	30,001 to 100,000	100,001 to 300,000	300,001 to 1,000,000	1,000,001 to 3,000,000	Population Value
Onsite	[illegible]	(20)	1	(2)	5	16	52	163	521	1,633	5,214	16,325	52,136	163,246	2
>0 to ¼ mile	50	20	1	1	(1)	4	13	41	130	408	1,303	4,081	13,034	40,811	1
> ¼ to ½ mile	200	2	0	0	1	(1)	3	9	28	88	282	882	2,815	8,815	1
> ½ to 1 mile	790	1	0	0	0	1	(1)	3	8	26	83	261	834	2,612	1
> 1 to 2 miles	4000	0	0	0	0	0	1	1	(3)	8	27	83	266	833	3
> 2 to 3 miles	950	0	0	0	0	0	(1)	1	1	4	12	38	120	376	1
> 3 to 4 miles	402	0	0	0	0	0	(0)	1	1	2	7	23	73	229	0

Nearest Individual = 20

Score = 9

PA TABLE 9: AIR PATHWAY VALUES FOR WETLAND AREA

Wetland Area	Assigned Value
Less than 1 acre	0
1 to 50 acres	25
Greater than 50 to 100 acres	75
Greater than 100 to 150 acres	125
Greater than 150 to 200 acres	175
Greater than 200 to 300 acres	250
Greater than 300 to 400 acres	350
Greater than 400 to 500 acres	450
Greater than 500 acres	500

PA TABLE 10: DISTANCE WEIGHTS AND CALCULATIONS FOR AIR PATHWAY SECONDARY SENSITIVE ENVIRONMENTS

Distance	Distance Weight	Sensitive Environment [illegible]	Environment Value
Onsite	0.10	x	
		x	
0-1/4 mi	0.025	x	
		x	
		x	
1/4-1/2mi	0.0054	x	
		x	
		x	
		x	

Total Environments Score = 0

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Site Name: ARIES ENTERPRISES 24
Date: 08/29/91

SITE SCORE CALCULATION

	S	S^2
GROUND WATER PATHWAY SCORE (S_{gw}):	16.9	256
SURFACE WATER PATHWAY SCORE (S_{sw}):	.61	.37
SOIL EXPOSURE PATHWAY SCORE (S_{se}):	2.6	6.76
AIR PATHWAY SCORE (S_a):	3.7	13.69
SITE SCORE: $\sqrt{\frac{S_{gw}^2+S_{sw}^2+S_{se}^2+S_a^2}{4}}$ =		8.3

RECOMMENDATION

SUMMARY

	YES	NO
1. Is there a high possibility of a threat to nearby drinking water wells by migration of hazardous substances in ground water?	☐	☒
A. If yes, identify the wells recommended for sampling during the SI.		
B. If yes, how many people are served by these threatened wells?		
2. Are any of the following suspected to have been exposed to hazardous substances through surface water migration from the site?		
A. Drinking water intake	☐	☒
B. Fishery	☐	☒
C. Sensitive environment: wetland, critical habitat, others	☐	☒
D. If yes, identify the targets recommended for sampling during the SI.		
3. Do people reside or attend school or day care on or within 200 ft of any area of suspected contamination?	☐	☒
4. Are there public health concerns at this site that are not addressed by PA scoring considerations? If yes, explain:	☐	☒

HRS DOCUMENT LOG SHEET SITE NAME PRIES ENTERPRISES, INC
CITY INDEPENDENCE
IDENTIFICATION NUMBER IAD051460485

REFERENCE NUMBER	DESCRIPTION OF REFERENCE
1	Wahl, K.D., Ladvigson G.A, Ryan G.L, and Steinkamp, Water Resources of East-Central Iowa, State of Iowa No. 6, 91p., 1978
2	Sherret D. and Cortenkamp J., Independence Water Department, Telephone Conversation Water Main Age, August 19, 1991
3	Iowa Department of Natural Resources, Des Moines. Telephone Conversation Fishery, August 19, 1991
4	CDM Field Notebook No. 1, Visual Site Investigation at Pries Site, July 17, 1991
5	Spill Pries Enterprises Abatement - Independence, 1987 Call # 0803 2-0JA-0430